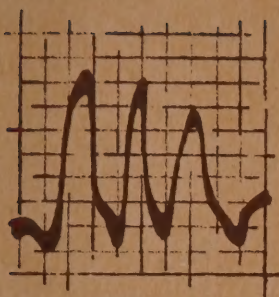
FAIR RADIO SALES CO., INC.
P.O. Box 1105
Lima, Ohio 45802
(419) 227-6573



SUPPLEMENT
TO
BOOK I
COMMUNICATION CENTRAL SYSTEM
AN/MRC-66 ( )
SUBSCRIBER EQUIPMENT

MOTOROLA INC.

WESTERN MILITARY ELECTRONICS CENTER

PHOENIX, ARIZONA

C. Teppei

SUPPLEMENT
TO
BOOK I
COMMUNICATION CENTRAL SYSTEM
AN/MRC-66 ( )
SUBSCRIBER EQUIPMENT

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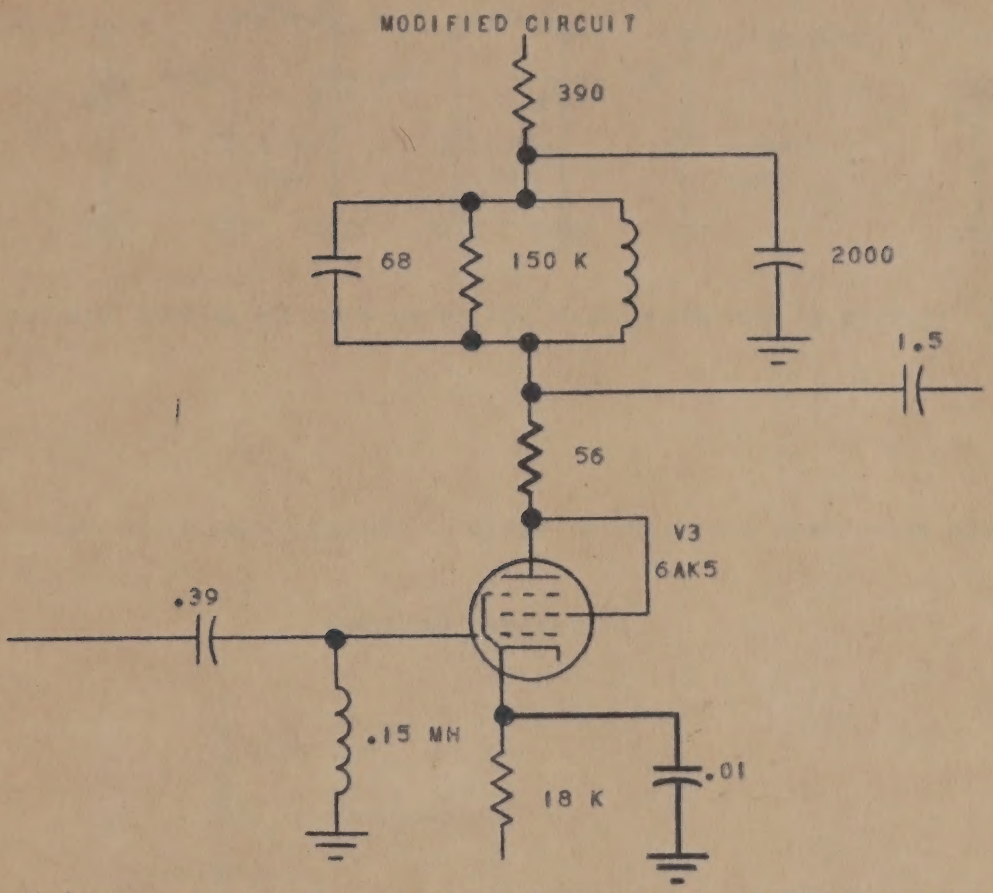
KEY

HEAVY LINE () ADDITIONAL ITEMS

DASH LINE (— — — — —) DELETED ITEMS

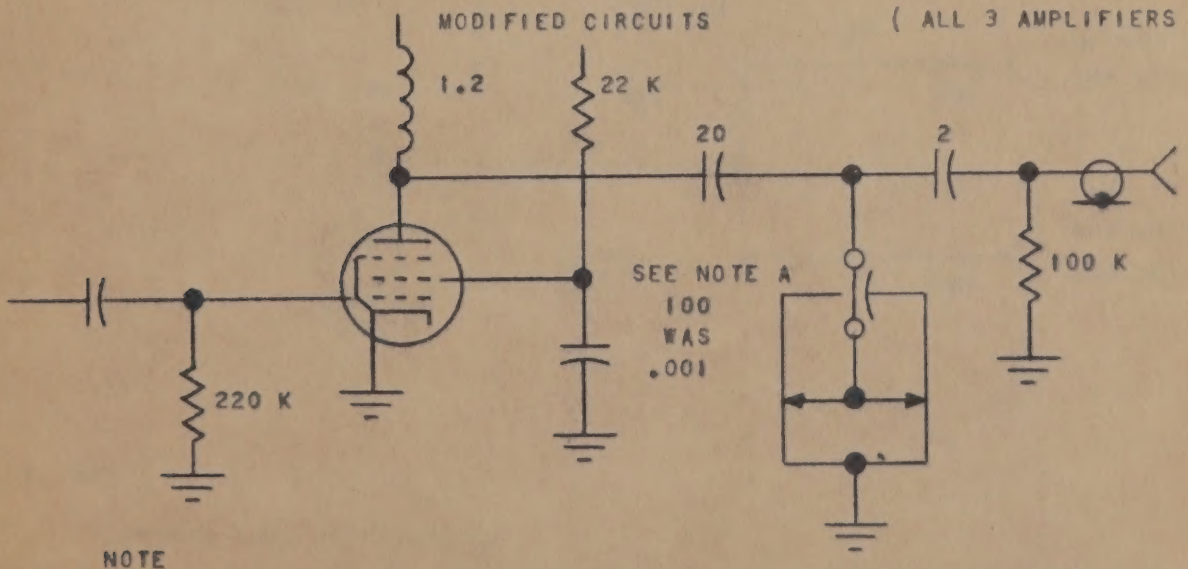
I RECEIVER

(A) HF MIX MODIFICATION (REFER TO VHF MIX SCHEMATIC).



(B) VHF ISOLATION AMPLIFIER MODIFICATIONS (REFER TO VHF MIX SCHEMATIC)

(ALL 3 AMPLIFIERS THE SAME)

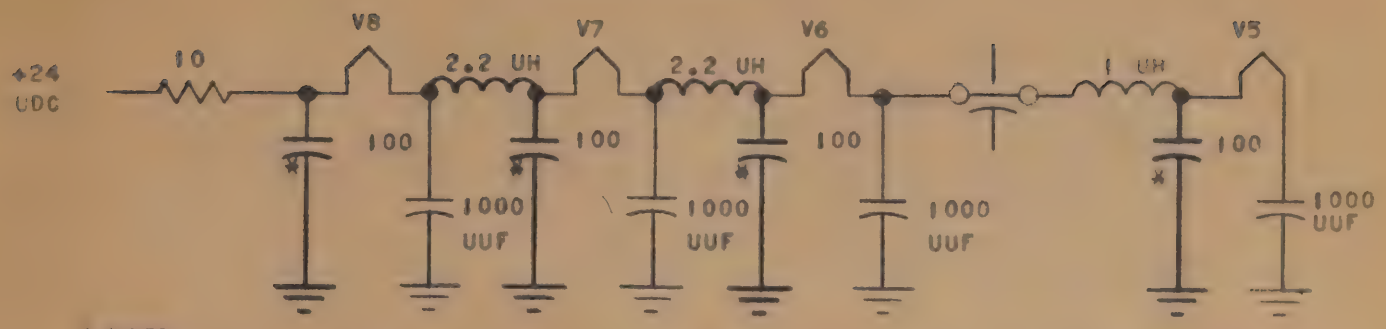


NOTE

(A) 100 UUF VHF SPECIAL BY PASS CAPACITOR WITH LEADS CUT TO LENGTH

(B) ALSO CATHODE LEAD AND CAPACITOR LEAD PUSHED AGAINST CENTER SHIELD AND SOLDERED

MODIFIED CIRCUIT

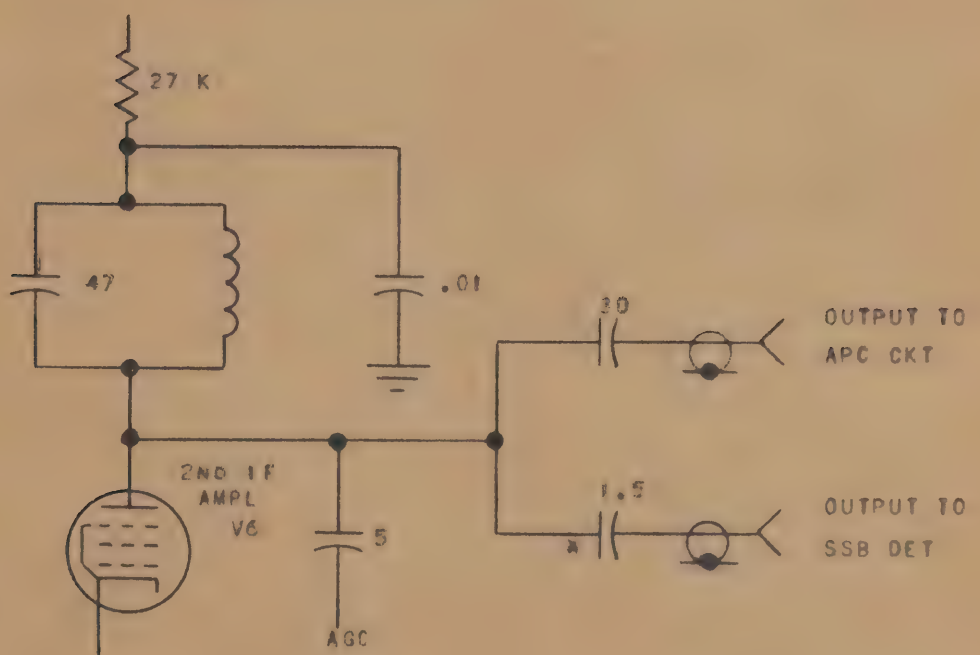


* NOTE

100 UUF VHF SPECIAL BY PASS CAPACITOR WITH LEADS OUT TO CORRECT LENGTH

(C) LF IF AMPLIFIER MODIFICATION (REFER TO FREQUENCY CORRECTION SCHEMATIC)

MODIFIED CIRCUIT

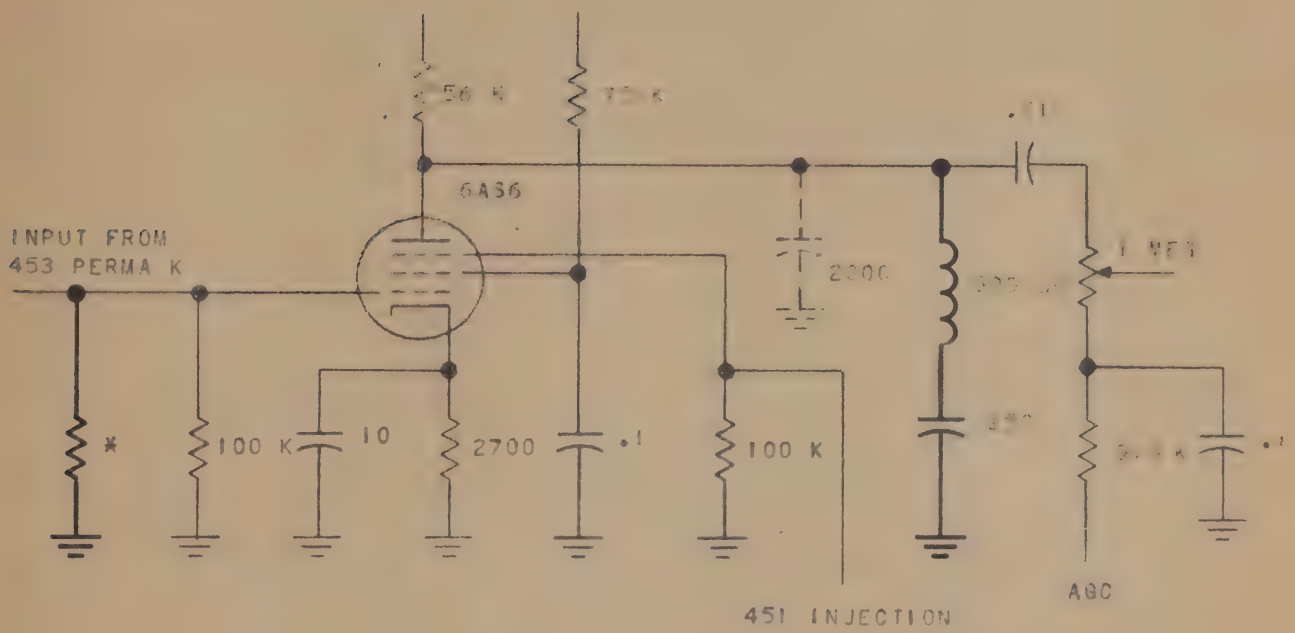


* NOTE

CERAMIC TUBULAR CAPACITOR

(D) SSB DETECTOR MODIFICATION

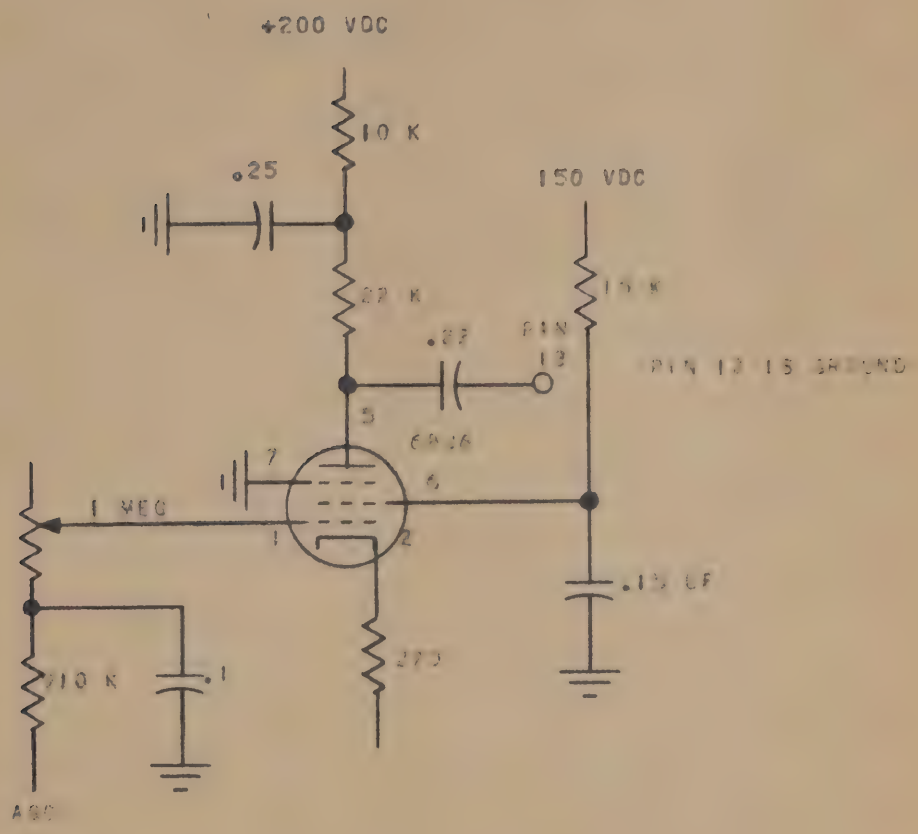
MODIFIED CIRCUIT



* RESISTOR VALUE CHOOSEN TO LIMIT MAXIMUM PEAK TO PEAK SIGNAL AT THE GRID OF SSB DETECTOR TO LESS THAN .3V FOR A 1:1 CARRIER TO SIDEBAND RATIO FROM SIGNAL GENERATOR.
GENERALLY THIS VALUE IS ABOUT 6.8 K

(E) 1ST AUDIO AMPLIFIER MODIFICATION

MODIFIED CIRCUIT



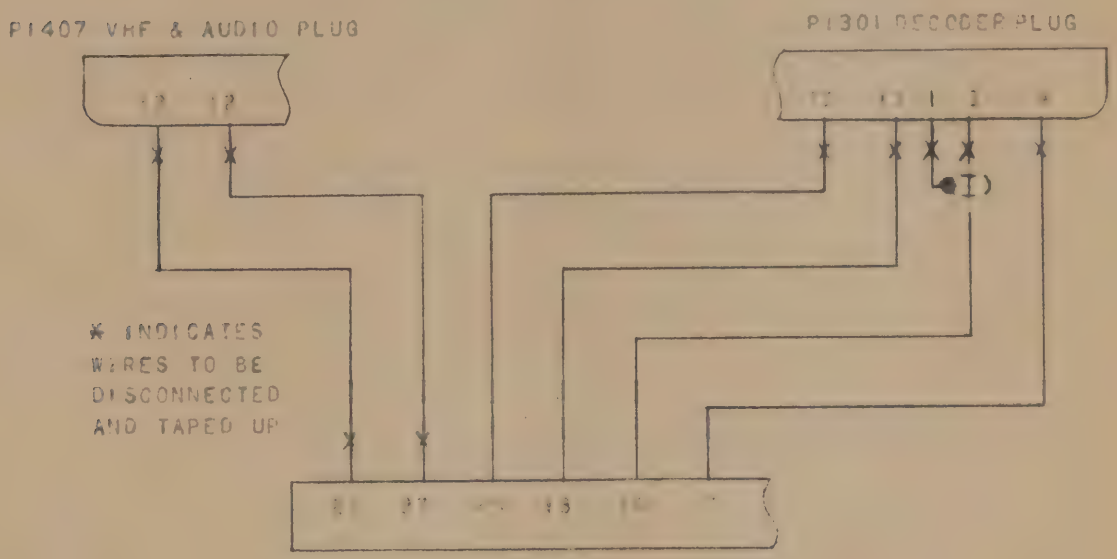
(F) [illegible]

(1) [illegible] REPLACE WITH THE ONE

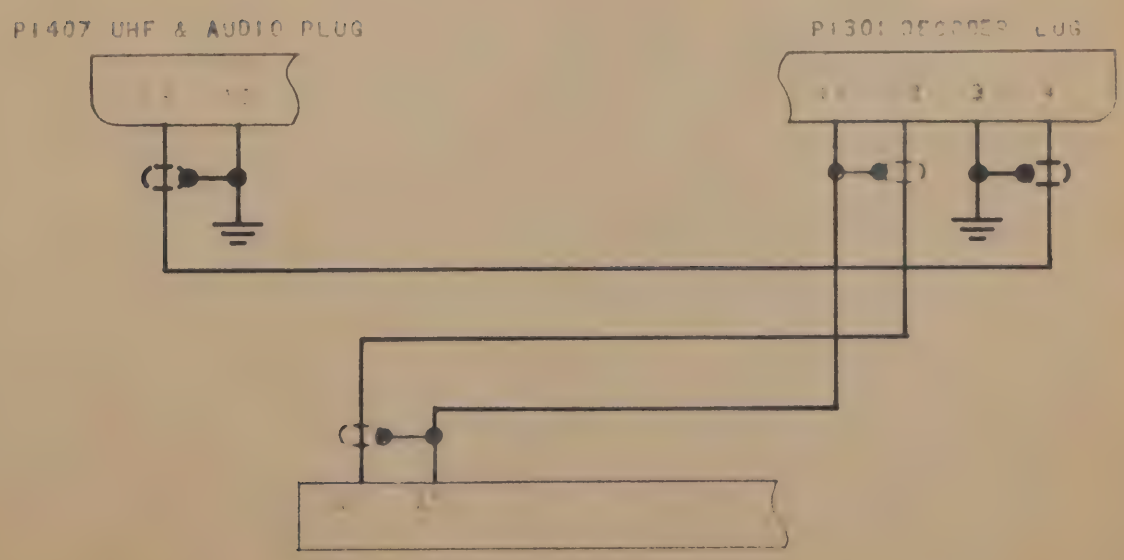
(2) REMOVE FROM THE SUBSCRIBER RECEIVER CHASSIS THE OLD STYLE DECODER CHASSIS AND REPLACE WITH AUTOMATIC DIALING DECODER.

(3) PERFORM THE FOLLOWING CABLE MODIFICATIONS

(A) OLD CIRCUIT



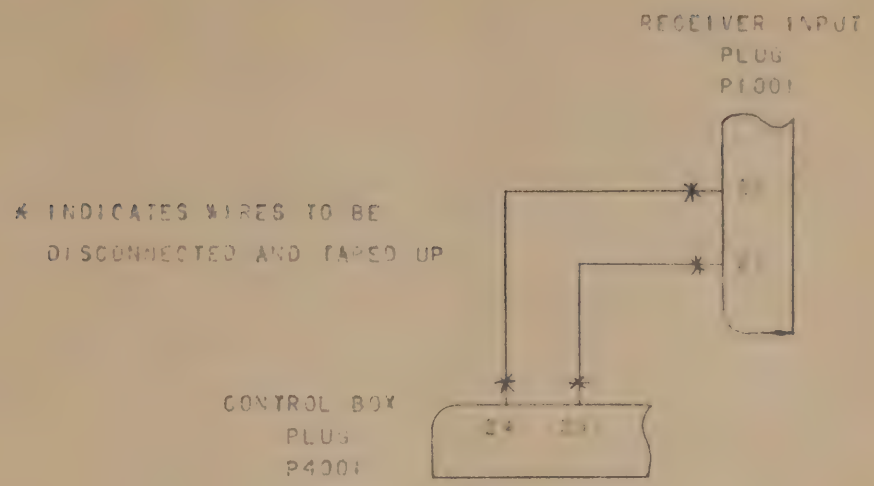
(B) MODIFIED CIRCUIT



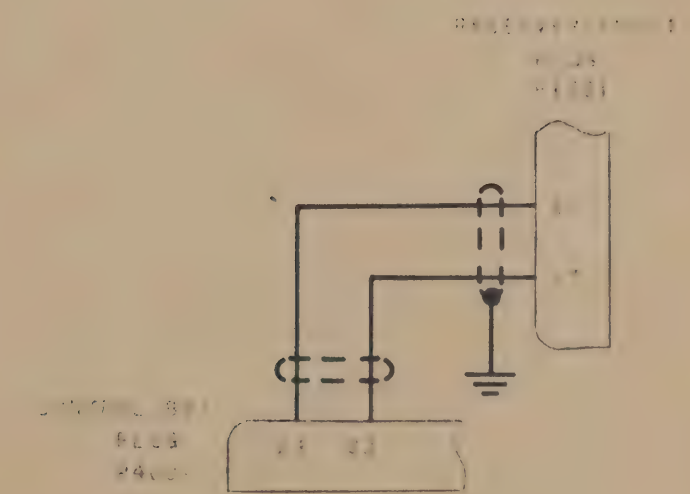
[illegible] PLUG

(G) MAIN FRAME CABLE MODIFICATION (TO REDUCE 2000 PICK UP IN AUDIO LEADS)

OLD CIRCUIT



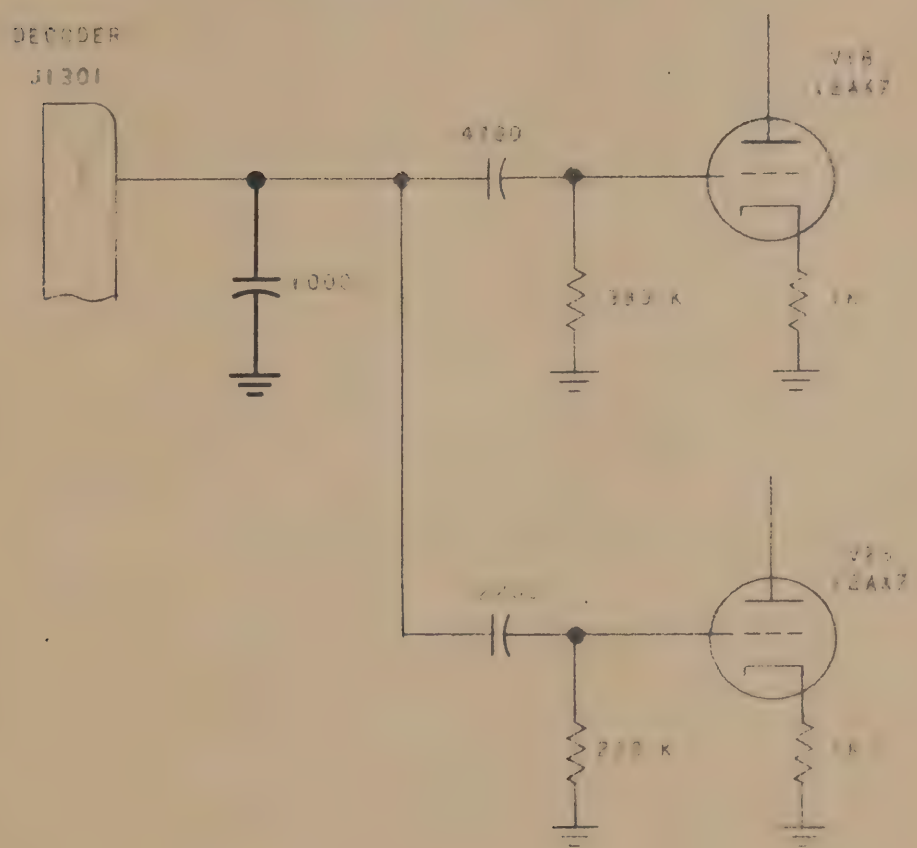
MODIFIED CIRCUIT



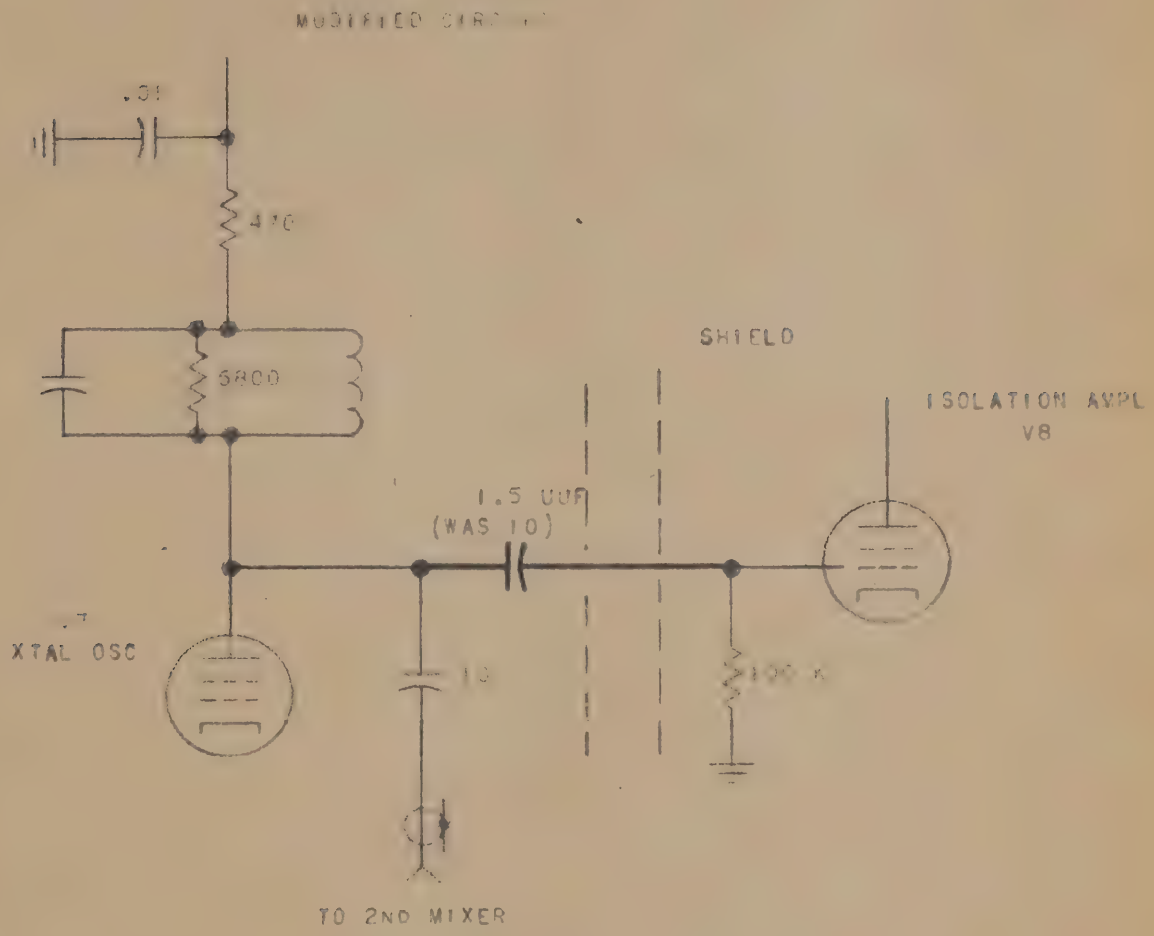
2 CONDUCTOR SHIELDED WIRE GROUNDED AT RECEIVER PLUG ONLY AND RUN VIA DIFFERENT ROUTE TO CONTROL PLUG

(H) DECODER MODIFICATION (WHEN USING OLD TYPE SIGNALING SYSTEM)

MODIFIED CIRCUIT

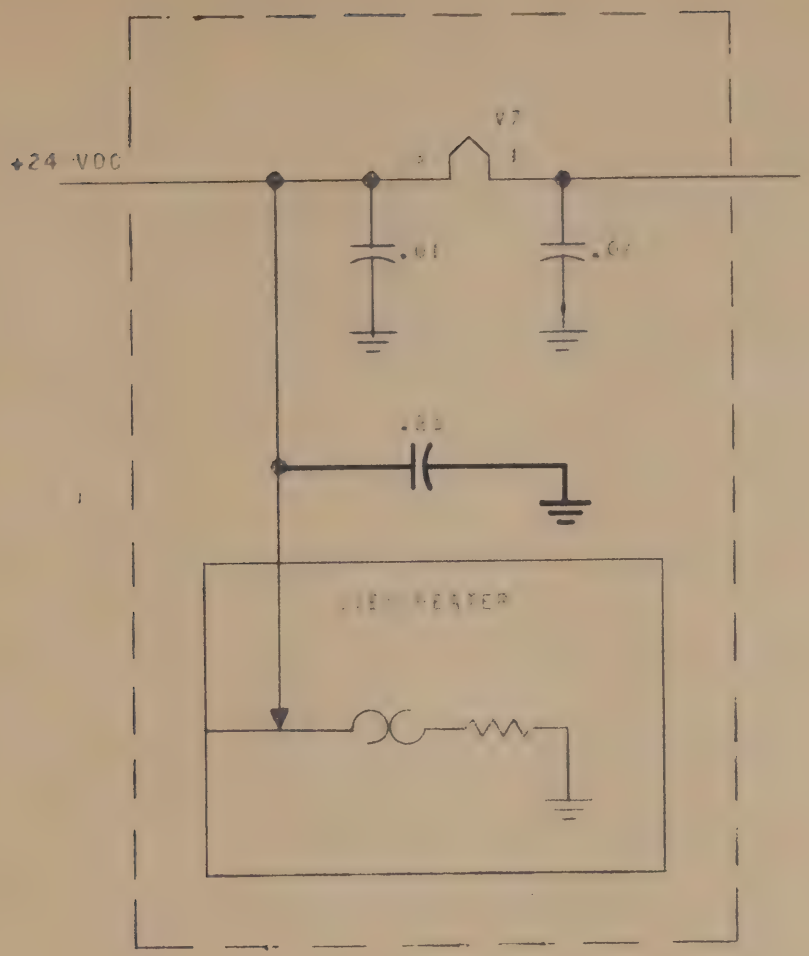


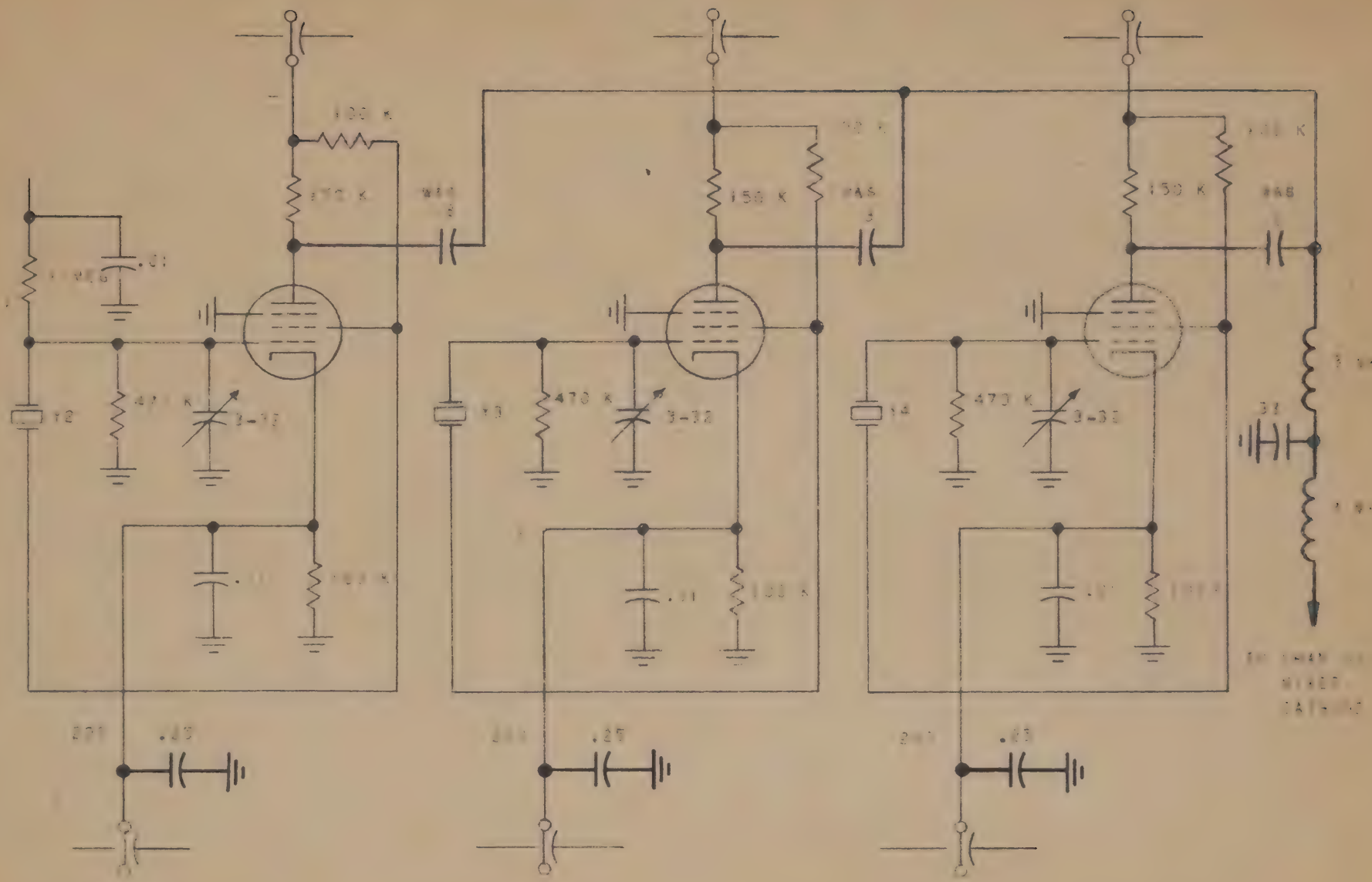
(1) HF (6.252 MC) CRYSTAL OSCILLATOR MODIFICATION



(8) CONTINUED

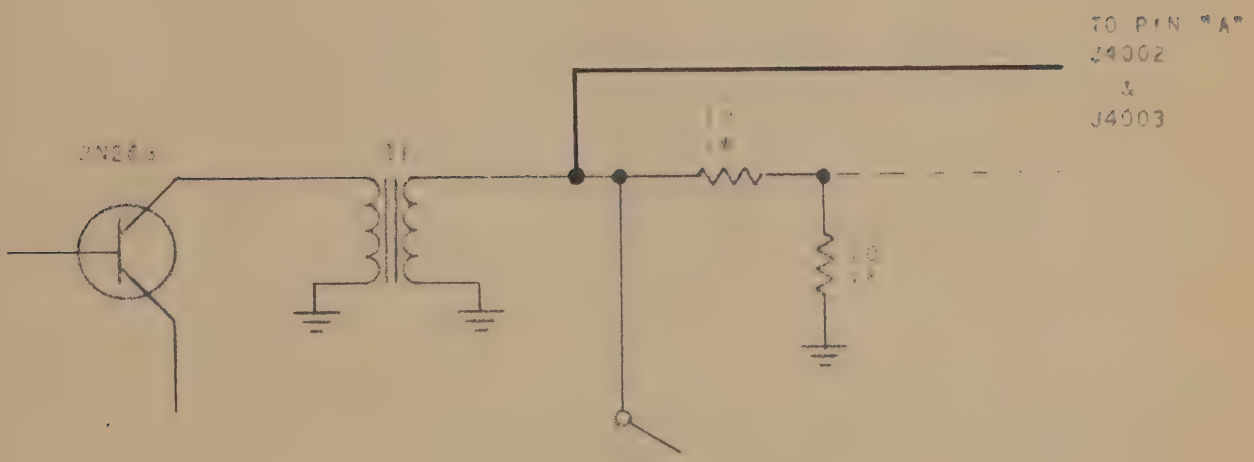
MODIFIED CIRCUIT




TO CONTROL
HEAD
TO CONTROL

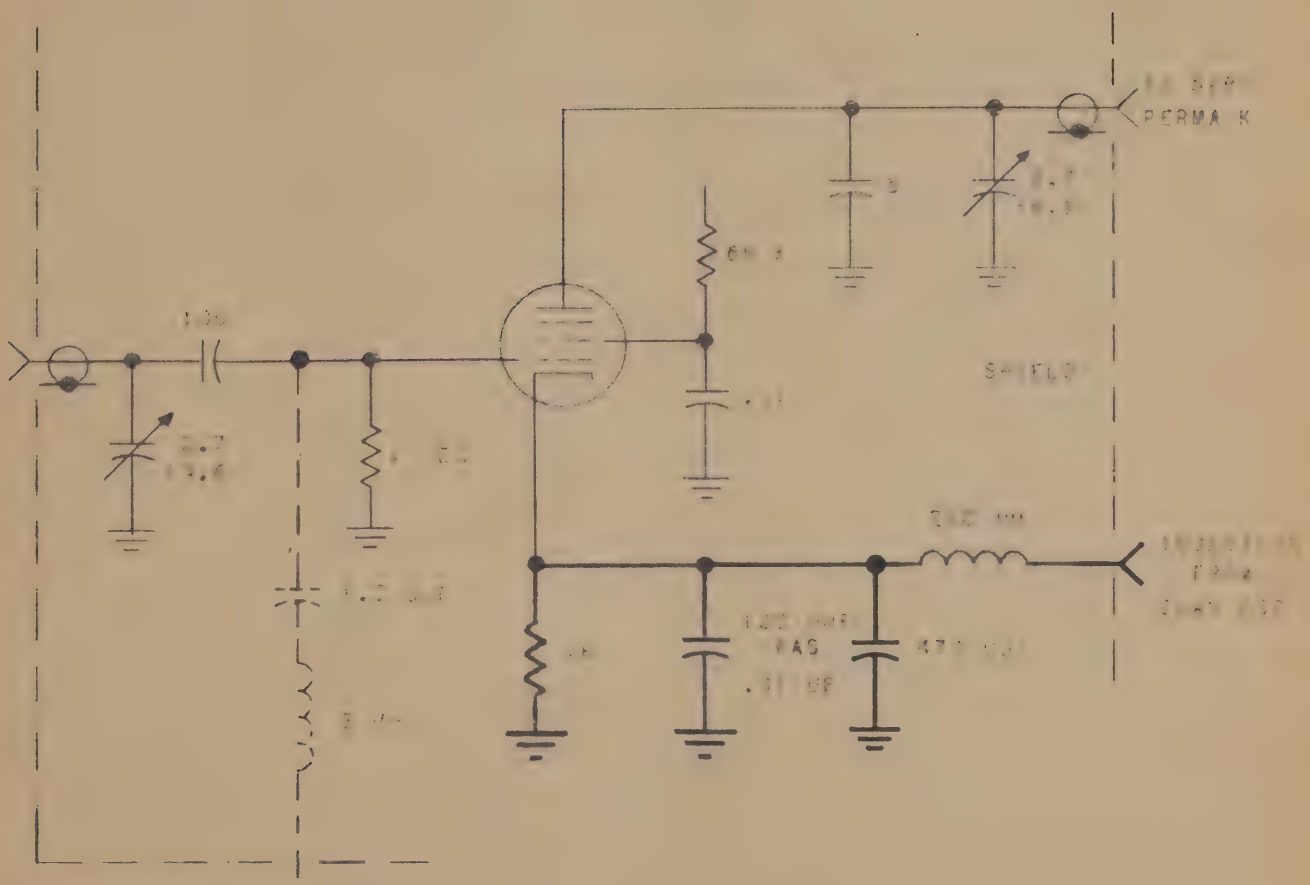
(L) OLD CONTROL HEAD MODIFICATIONS

MODIFIED CIRCUIT



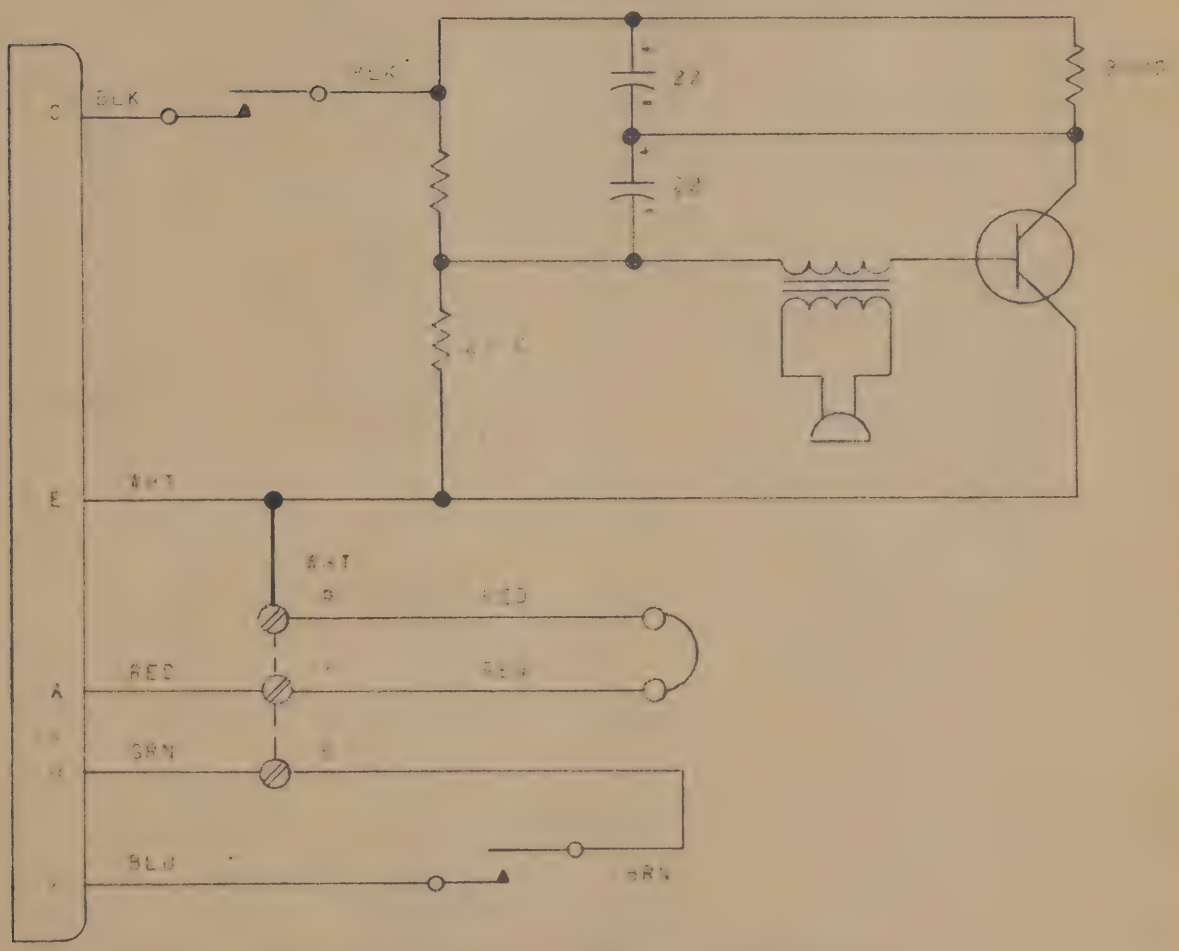
(J) CHANNEL OSCILLATOR MIXER MODIFICATION

MODIFIED CIRCUIT



(M) HANDSET MODIFICATIONS FOR USE WITH NEW CONTROL BOX FOR AUTOMATIC SIGNALING

MODIFIED CIRCUIT



STEP BY STEP DESCRIPTION OF HAND SET MODIFICATION

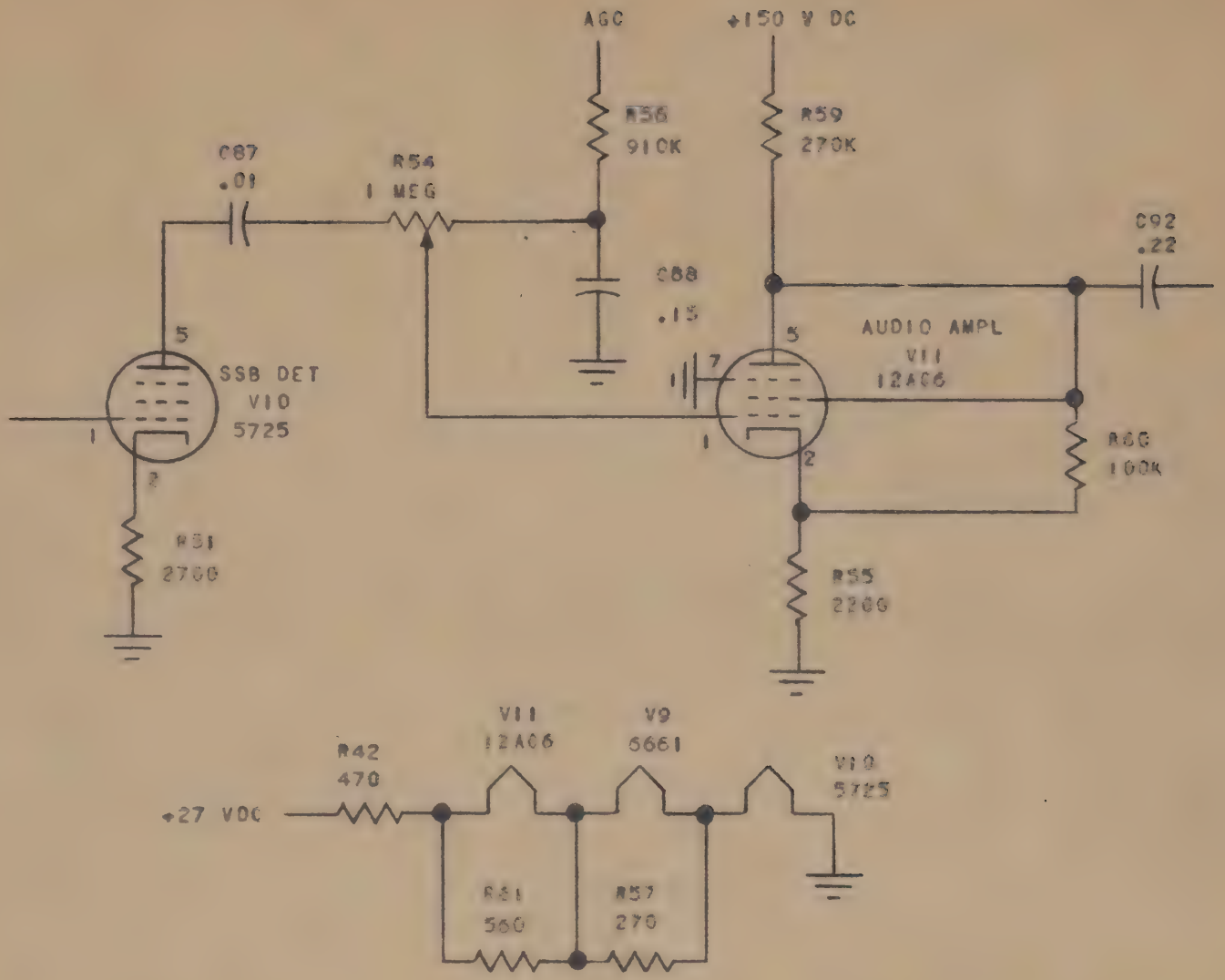
(1) U77/U CONNECTOR:

(A) REMOVE GREEN CORD LEAD FROM PEN "K" AND CONNECT TO PEN "H"

(2) HANDSET:

(A) REMOVE GREEN CORD LEAD AND BROWN PUSH TO TALK SWITCH LEAD FROM SCREW TERMINAL "R" AND CONNECT THEM TO SCREW TERMINAL "B"

(B) CONNECT A 3 TO 4 INCH LONG WHITE WIRE FROM TERMINAL "R" TO WHITE CORD LEAD SOLDERED TO TRANSISTOR PREAMP. BE SURE TO USE A HEAT SINK WHEN SOLDERING TO TRANSISTOR PREAMP TERMINAL



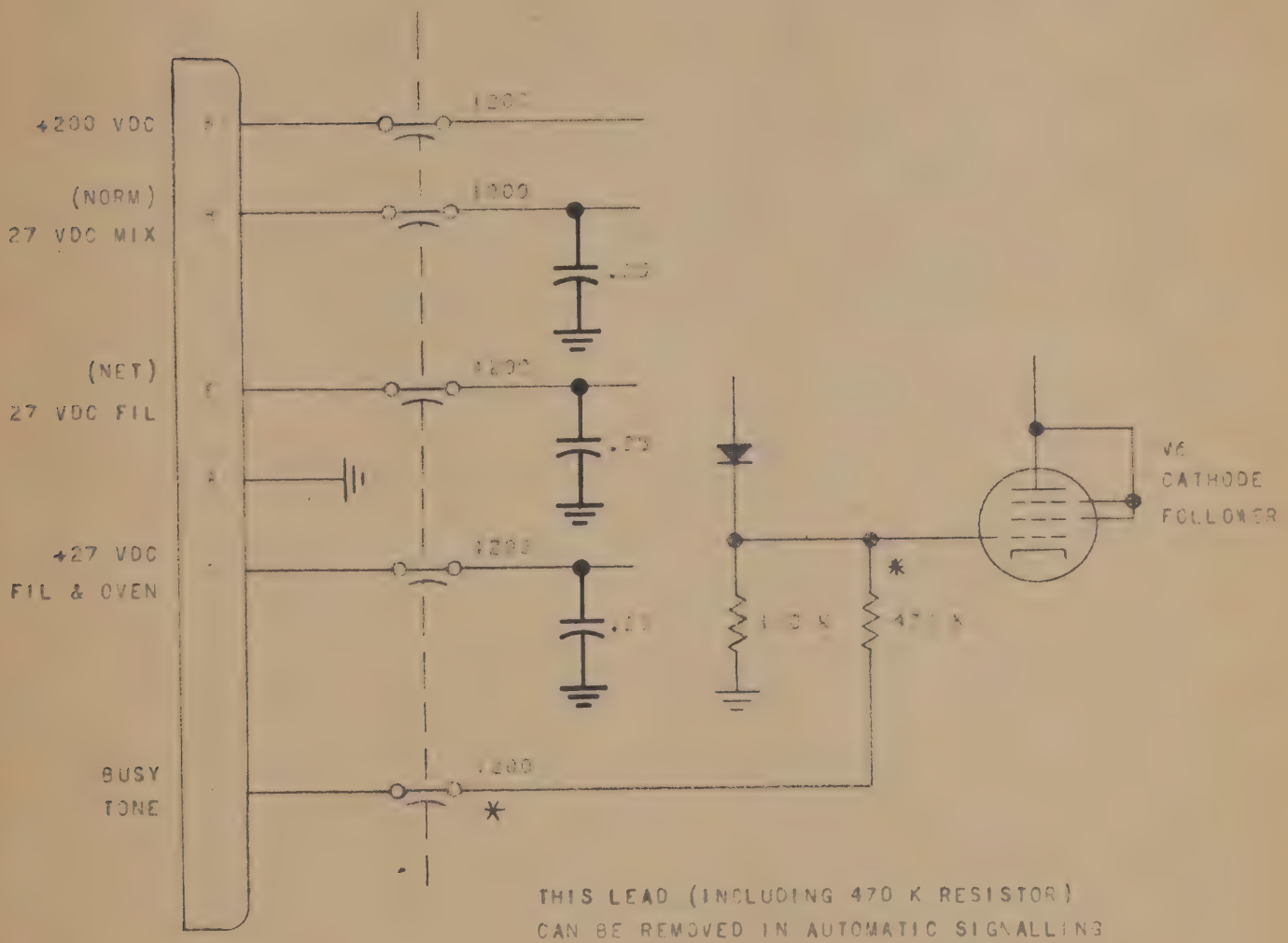
SUBSCRIBER STATION FIRST AUDIO AMPLIFIER MODIFICATION

(SEE FIGURE 4.30 SUBSCRIBER STATION MANUAL)

II TRANSMITTER

(A) SCREEN FUSE HOLDER MODIFICATION
(1) REMOVE ENTIRE FUSE ASSEMBLY FROM TRANSMITTER BOX AND REPLACE WITH 3AG TYPE

(B) SINGLE SIDEBAND GENERATOR MODIFICATIONS
(1) MODIFIED CIRCUIT (REFER TO 338 GEN. SCHEMATIC FIGURE 4.60)



(C) OSCILLATOR MIXER MODIFICATION
(1) REMOVE 27 K 1/2W RESISTOR R5 AND REPLACE WITH A PIECE OF WIRE
(2) CHANGE 100 K RESISTOR R7 TO 47 K 1/2W RESISTOR
(3) ADD 6.8 K 1/2W RESISTOR ACROSS INPUT OF PERMA K FILTER

(3) CHANGE 360 KC NET OSC XTAL TO 405 KC XTAL

RECEIVER BOX

(1) CHANGE 149 MC XTAL OSC OVEN TO NEW GLASS THERMOSTAT TYPE
(2) CHANGE 6150 KC XTAL TO 6252 KC XTAL
(5) CHANGE CHANNEL 1 & 2 XTAL'S AS OUTLINED BELOW FOR ALL SUBSCRIBERS

SUBSCRIBER NUMBER	CHANNEL 1		CHANNEL 2		CHANNEL 3	
	OLD XTAL	NEW XTAL	OLD XTAL	NEW XTAL	OLD XTAL	NEW XTAL
1, 2, 17 & 18	A 368	A 475	B 362	B 469	N 374	N 418
3, 4, 19 & 20	B 362	B 469	C 356	C 463	N 374	N 418
5, 6, 21 & 22	C 356	C 463	D 350	D 457	N 374	N 418
7, 8, 23 & 24	D 350	D 457	E 344	E 445	N 374	N 418
9, 10, 25 & 26	E 344	E 445	F 338	F 439	N 374	N 418
11, 12, 27 & 28	F 338	F 439	G 332	G 433	N 374	N 418
13, 14, 29 & 30	G 332	G 433	H 326	H 427	N 374	N 418
15, 16, 31 & 32	H 326	H 427	A 368	A 475	N 374	N 418